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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,632	12/14/2001	Jonathan F. Hester	56754US002	6407

32692 7590 08/26/2005

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EXAMINER

VO, HAI

ART UNIT PAPER NUMBER

1771

DATE MAILED: 08/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/017,632	HESTER ET AL.	
	Examiner	Art Unit	
	Hai Vo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2005.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 29,32,34-39,41-53,56 and 57 is/are pending in the application.
- 4a) Of the above claim(s) 37 and 43-53 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 36 is/are allowed.
- 6) ☒ Claim(s) 19,32,34,35,38,39,41,42,56 and 57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. All of the art rejections are maintained.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 29, 34, 35, 38, 41, 42, 56, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 200044472 in view of Jensvold et al (US 6,153,097) substantially as set forth in the 03/22/2005 Office Action.
4. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 200044472 in view of Jensvold et al (US 6,153,097) and WO 99/65593 substantially as set forth in the 03/22/2005 Office Action.
5. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 200044472 in view of Jensvold et al (US 6,153,097) and WO 99/65593 as applied to claim 32 above, further in view of Taniguchi et al (US 6,322,703) substantially as set forth in the 03/22/2005 Office Action.

***Allowable Subject Matter***

6. Claim 36 is allowed. Since the Insley invention is directed to an air filter, one of skill in the art would not be motivated to add a microbial population adjacent to the cap layer of the air filter because to do so would destroy the air filter for its intended utility.

***Response to Arguments***

7. The art rejections have been maintained for the following reasons. Applicants argue that there is no indication that Jensvold's membrane is gas permeable, water impermeable microporous membrane. The examiner disagrees. Applicants' attention is directed to column 7, lines 60-61 of Jensvold. It appears that the Jensvold microporous membrane is made from polyethylene or polypropylene as the gas permeable, water impermeable layer of the present invention. Therefore it is not seen that the same materials have different properties. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. Applicants further argue that there is no indication of desirability of combining Jensvold's microporous membrane into the filtration media array of Insley. The arguments are not found persuasive for patentability. Jensvold teaches that the microporous membrane is in the form of a flat sheet, hollow tube, hollow fibers or an open cellulofoam (column 8, lines 1-10, column 10, lines 15-20). Both Insley and Jensvold inventions are related to purification apparatus or separation devices. Insley '824 teaches every element of the presently claimed subject matter except the contour structured layer being formed from a microporous membrane or foam. In view of teaching of Jensvold, one of skilled in the art would be motivated to replace the contoured structured layer with the microporous membrane or the foam of the Jensvold invention for the high separation efficiency, cost effectiveness, improved mechanical properties and higher resistance to temperature variations (Jensvold, column 1, lines 24-26 and

column 2, lines 1-5). The examiner maintains that the motivation to combine the two cited references is strong and sufficient and therefore, the art rejections are sustained. The declaration of Thomas Insley have been considered and reviewed thoroughly. However, the declaration is not found persuasive to overcome the art rejections. Mr. Insley states that *in his opinion*, it is not obvious for one skilled in the art to combine teachings of Jensvold with his patent because Jensvold's hollow fiber membranes would not function in the Insley '824 invention. The assertions are not found persuasive because no factual evidence, no experimentation data are provided to support Mr. Insley's statements. Additionally, Jensvold teaches the permeate flow channels made from a foam material have mechanical strength to promote appropriate flow along the length of the foam material (column 10, lines 10-20). Hence, the replacement of Insley's contoured structured layer with the microporous membrane or the foam of the Jensvold invention would not interfere with the air flow described in the Insley invention.

Applicants argue that Insley does not disclose his cap layer as the coating which conforms to the shape of the contoured film layer. The examiner disagrees. Applicants' attention is directed to column 3, lines 60-66. The cap layer can be a contoured cap layer and covers all the portions of the contoured film layer.

Applicants argue that the contoured film layer does not contain fluorochemical additives, but rather the filter layer contains fluorochemical

additives. The examiner disagrees. Insley teaches that the electrostatic charging enhances the contoured film layer's ability to remove particulate matter from a fluid stream (column 5, lines 50-55). This suggests that the contoured film layer itself is a filter layer as well.

Applicants agree that nothing in the Insley invention discloses a layer of non-woven fibrous material over the cap layer. The face of the array over which the non-woven is placed represents the ends of the flow channels formed by Insley's stacked contoured film 10 and cap layer 11. The examiner disagrees. Figure 8 of Insley shows a contoured film layer joined to a non-woven layer. Insley further discloses a further cap film layer would need to join to the contoured film layer (column 4, lines 6-11). Likewise, the filtration media array has a layer constructions as follows: cap film layer/contoured film layer/nonwoven layer, which reads on layered sheet construction of the present invention.

Applicants argue that one skilled in the art would not look to Jensvold's teaching to improve Insley's filtration media array because there is no reason to believe that Jensvold's membrane would give the benefits to Insley's filter media arrays. The arguments are not found persuasive for patentability. Both Insley and Jensvold inventions are related to purification apparatus or separation devices. Jensvold teaches that the microporous membrane is in the form of a flat sheet, hollow tube, hollow fibers or an open cellulofoam (column 8, lines 1-10, column 10, lines 15-20). Jensvold teaches the microporous membrane made

from polyethylene or polypropylene. This is exactly material used by Applicants to form the gas permeable, water impermeable layer of the present invention.

Therefore it is not seen that the microporous membrane of Jensvold would not be gas permeable and water impermeable. Like material has like property.

Jensvold teaches the permeate flow channels made from a foam material have mechanical strength to promote appropriate flow along the length of the flow channels (column 10, lines 10-20). Hence, the replacement of Insley's contoured structured layer with the microporous membrane or the foam of the Jensvold invention would in no way interfere with the air flow described in the Insley invention. Accordingly, the art rejections are sustained.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

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the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Hai Vo*

HV

**HA VO  
PRIMARY EXAMINER**